

**REMARKS**

Claims 1-4 and 6 are all the pending claims. Claims 5, 7 and 8 are canceled, and claims 1-4 and 6 are rejected. Claims 1 and 4 have been amended, and support for the claim amendment can be found throughout the specification and originally filed claims. Specifically, support for the claim amendments can be found in at least page 23.

Accordingly, no new matter has been introduced by these amendments to claims.

**I. Information Disclosure Statement (IDS)**

Applicants thank the Examiner for returning a signed and initialed copy of the PTO Forms SB/08 that accompanied the Information Disclosure Statements filed September 29, 2008.

**II. Response to Claim Rejections Under 35 U.S.C. § 103**

Claims 1-4 and 6 remain rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Furcht *et al.* (U.S. Patent No. 7,015,037, “Furcht”), in view of Kokuzawa *et al.* (U.S. Patent Application Publication No. 2006/0134078, “Kokuzawa”).

Applicants have amended claims 1 and 4 solely to expedite the prosecution. Applicants assert that the current amendments to claims 1 and 4 render moot all outstanding claim rejections, because the cited art fails to teach each and every element of the presently claimed invention.

To establish a *prima facie* case obviousness the cited references must disclose all of the claim limitations. *In re Royka*, 490 F.2d 981, 984 (CCPA 1974). Applicants assert that the combination of Fercht and Kokuzawa does not teach or suggest “a medium comprising growth

factors, wherein the growth factors are consisting of a epithermal growth factor and a hepatocyte growth factor,” as recited in claims 1, either explicitly or inherently.

Since claims 2-4 and 6 depend directly or indirectly from claim 1, Applicants submit that claims 2, 7 and 8 are patentable at least by virtue of their dependency.

Moreover, as MPEP § 716.02(a) states, “[e]vidence of unobvious or unexpected advantageous properties, such as superiority in a property the claimed compound shares with the prior art, can rebut *prima facie* obviousness. ‘Evidence that a compound is unexpectedly superior in one of a spectrum of common properties . . . can be enough to rebut a *prima facie* case of obviousness.’ ... *In re Chupp*, 816 F.2d 643, 646, 2 USPQ2d 1437, 1439 (Fed. Cir. 1987) ... [p]resence of a property not possessed by the prior art is evidence of nonobviousness. *In re Papesch*, 315 F.2d 381, 137 USPQ 43 (CCPA 1963).’” The present invention teaches unexpectedly superior results of MSC differentiation method with a prior confluent culture, not possessed by MSC differentiation method without a prior confluent culture. Specifically, as described in the Declaration under 37 C.F.R. § 1.132 by Hyun-Soo Kim, submitted herewith, the presently claimed method comprising a confluent culture of MSCs prior to their differentiation results in an unexpectedly significant increase in a differentiation rate of MSC, as compared to a method without a confluent culture of MSCs prior to their differentiation. Table 3 on page 23 of the specification. Moreover, since Applicants’ method of differentiating MSC with a prior confluent culture results in faster differentiation of MSCs, which can be applied to a patient sooner and at an earlier stage of differentiation than those differentiated without a prior confluent culture, such as those of Furcht. This is clinically important in that it makes a MSC treatment more effective. Accordingly, Applicants’ method of differentiating MSC with a prior confluent culture results in unexpectedly superior MSC treatment of a patient.

Applicants respectfully submit that the claimed invention is not obvious over the combination of Furcht and Kokuzawa because of the above-mentioned unexpectedly superior results due to confluent culture of MSCs prior to their differentiation.

For the foregoing reasons, Applicants respectfully submit that the claims are not rendered obvious by the cited references and request that this rejection under 35 U.S.C. § 103 be reconsidered and withdrawn.

**U.S.P. 7,229,827**

At the telephonic conference conducted on June 3, 2009 between the Examiner and the counsel of the applicants, the Examiner brought U.S.P. 7,229,827 owned by the assignee of the instant application for a possible obviousness-type double patenting. Applicants agreed to review the '827 patent.

Applicant respectfully submit that the currently amended claims of the instant application are not obvious variant of the claimed subject matter of the '827 patent.

**III. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

/Sunhee Lee/

---

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

Sunhee Lee  
Registration No. 53,892

WASHINGTON OFFICE  
23373  
CUSTOMER NUMBER

Date: July 6, 2009